

Notice of Allowability

Application No.

10/663,417

Examiner

Albert J. Gagliardi

Applicant(s)

IWATSCHENKO-BORHO ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to submissions of 10 November 2005.
2. ☒ The allowed claim(s) is/are 1-30 and 32-36.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 7/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT AND STATEMENT OF REASONS FOR ALLOWANCE

Examiner's Amendment

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Barry Chapin on 13 December 2005.

3. The application has been amended as follows:

Claim 31 has been cancelled.

Claims 14 and 32 have been amended as follows:

14. (Amended) The radiation detection system of claim 12 further including a third radiation detector that is also a Gamma radiation detector, and wherein the Neutron detector is coupled to both controllers associated with the traffic ways adjacent to the radiation detector assembly.

32. (Amended) A method for operating a radiation detection system to detect a radiation source on or within traffic that can travel within adjacent traffic ways, the method comprising:

detecting a vehicle traveling in a traffic way of the adjacent traffic ways;

receiving a radiation signal from an unshielded radiation detector disposed within a radiation detector assembly positioned between the adjacent traffic ways; and

in response to detecting the vehicle and receiving the radiation signal, applying a natural background rejection signal processing technique to the radiation signal to differentiate between

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changes induced in radiation produced by naturally occurring radiation sources received by the unshielded radiation detector due to a position of the vehicle in relation to the unshielded radiation detector and changes in radiation caused by a non-natural radiation source that may be within the vehicle, the natural background rejection signal processing technique producing an output signal indicating whether or not the vehicle contains the non-natural radiation source; and

wherein there are M adjacent traffic ways, where M is an integer equal to or greater than a value of 2, and wherein the radiation detection system comprises a set of $(M+1)$ radiation detector assemblies, individual radiation detector assemblies of the set of $(M+1)$ radiation detector assemblies respectively positioned at each of two sides of each of the M adjacent traffic ways and a set of M controllers, each controller associated with a respective traffic way of the M adjacent traffic ways, each controller coupled to the respective individual radiation detector assemblies positioned at the two sides of the traffic way to which that controller is associated, such that two controllers associated with two adjacent traffic ways couple to the individual radiation detector assembly positioned between those two adjacent traffic ways; and

wherein receiving a radiation signal comprises:

operating controllers of traffic ways adjacent to the radiation detector assembly containing the unshielded radiation detector that produced the radiation signal to each receive the radiation signal to identify the non-natural radiation source present in the vehicle in the traffic way adjacent to that radiation detector assembly.

4. The above amendments were made without prejudice in order to correct an obvious typographical error (claim 14) and to incorporate join subject matter from non-elected groups II and III into the elected and otherwise allowable Group I.

Election/Restrictions

5. Applicant's election without traverse of Group I in the reply filed on 10 November 2005 is acknowledged.

Allowable Subject Matter

6. Claims 1-30 and 32-36 are allowed.

7. The following is an examiner's statement of reasons for allowance:

Regarding independent claims 1, 28, 32, and 36, the prior art does not disclose or fairly suggest apparatus (claims 1 and 28) or methods (claims 32 and 36) for detecting a radiation source within traffic of multiple adjacent traffic ways including a multiple radiation detector assemblies, the number being one more than the number of adjacent traffic ways, and multiple controllers each associated with a respective traffic way, the number of controllers equal to the number of adjacent traffic way, and wherein the controllers are coupled to respective detector assemblies defining the respective traffic way.

The examiner notes that while systems are known for detecting radiation sources within a traffic way including two detector assemblies and a single controller (see for example Johnston – US 5,679,956), and that it would further have been obvious to duplicate the arrangement (i.e., doubling the number of detectors and the number of controllers) so as to allow for the monitoring of multiple traffic lanes, such prior art does not suggest the synergistic arrangement wherein only a single detector assembly and controller is added per additional traffic way.

The examiner also notes that while a synergistic x-ray inspection system for multiple traffic ways is known in the art (see for example Johnson – US 6,937,692) wherein vehicles within multiple lanes of traffic can monitored by in the traditional manner (i.e., duplication) by

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adding an additional source/detector pairs (see generally Fig. 15) or adding only a single detector and utilizing a rotatable/panoramic source (see generally Figs. 13 and 15), it would not have been considered obvious, absent hindsight reasoning, to modify the prior art monitoring system in view of the multilane inspection system because the principles of operation are different (*Johnston* is essentially a passive monitoring system relying on detector/detector pairs, while *Johnson* is a active inspection system relying on source/detector pairs). Additionally, it is noted that even if it were considered obvious to modify *Johnston* in view of *Johnson*, there is no necessary suggestion for the specifically recited detector assembly/controller configuration.

The examiner additionally considers that the combination suggested in the International Search Report of related PCT Application US04/24985 would not have been obvious for similar reasons (i.e., a non-analogous art modification of a passive system in view of an active system).

The remaining claims are allowed on the basis of their dependency.

8. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert J. Gagliardi whose telephone number is (571) 272-2436.

The examiner can normally be reached on Monday thru Friday from 10 AM to 6 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Albert J. Gagliardi
Primary Examiner
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AJG